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Search Report
EIC 3600

To: CHRYSTINA ZELASKIEWICZ
Location: KNX5A64
Art Unit: 3600
Date: November 12, 2009
Case Serial Number:

From: *Sylvia Keys*
Location: EIC3600
KNX 4B59
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sylvia.keys@uspto.gov

Search Notes

Dear Examiner **ZELASKIEWICZ**:

Please find attached the results of your search for the above-referenced case. The search was conducted in Dialog, the Internet and EBSCO HOST.

I have listed *potential* references of interest in the first part of the search results. However, please be sure to scan through the entire report. There may be additional references that you might find useful.

If you have any questions about the search, or need a refocus, please do not hesitate to contact me.

Thank you for using the EIC, and we look forward to your next search!

I. Potential References of Interest

A. Dialog

0 results

II. Inventor Search Results from Dialog

20/3,K/1   (Item 1 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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01025666   **Image available**
A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF PROTECTED
    SOFTWARE UTILIZING A PORTABLE SECURITY DEVICE
SYSTEME ET PROCEDE METTANT EN OEUVRE UN DISPOSITIF DE SECURITE PORTATIF
    POUR EMPECHER L'UTILISATION NON AUTORISEE D'UN LOGICIEL PROTEGE
Patent Applicant/Assignee:
  PACE ANTI-PIRACY INC, 1363 Meridian Avenue, San Jose, CA 95125, US, US
    (Residence), US (Nationality)
Inventor(s):
  FONTANA Joseph M, 966 El Rio Drive, San Jose, CA 95125, US,
  CRONCE Paul A, 1475 Weaver Drive,
    San Jose, CA 95125, US,
Legal Representative:
  SULLIVAN Stephen G (agent), Sawyer Law Group LLP, P.O. Box 51418, Palo
    Alto, CA 94303, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200354662 A2-A3 20030703 (WO 0354662)
  Application: WO 2002US40185 20021217 (PCT/WO US02040185)
  Priority Application: US 200128581 20011220
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
  SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK
  TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 9183

A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF PROTECTED
    SOFTWARE UTILIZING A PORTABLE SECURITY DEVICE
Inventor(s):
... CRONCE Paul A
Patent Applicant/Inventor:
Fulltext Availability:

Detailed Description
Claims

English Abstract
A method and system for protecting **software** from
unauthorized use on a computer system using an external security device
(130) is disclosed. The method and system include encrypting the
software to be protected using an encryption key. The
use of the **software** on the computer system is then
authorized by generating the encryption key within the security device
(130) using information supplied from the softwre. Once the encryption
key generated by the security device (130) is received on the computer
system, the encryption key used to decrypt the encrypt
software for execution on the computer system.

Detailed Description
A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF
PROTECTED **SOFTWARE** UTILIZING A PORTABLE SECURITY
DEVICE
FIELD OF THE INVENTION
The present invention relates generally to the prevention of
software piracy and more particularly to preventing
unauthorized use of protected **software** by utilizing a
portable personal security device.

BACKGROUND OF THE INVENTION
The problem of **software** piracy is well known in the
computer industry. This problem results in substantial losses for
software developers. Many methods have been used to
try to prevent unauthorized use of **software** over the
years, with limited success. Typically, the effort put out to break
protection schemes is proportional to the value of the protected
software. Thus, if a **software**
program has high demand, such as a computer game, or
has a high cost per unit, such as a professional tool sold to a small
market, it is likely to be attacked by **software**
hackers for the purpose of creating an unprotected version of the
product. This unprotected version is then made available to others at low
cost or recording industry and computer games
industry, that some companies are unable to guarantee' the profitability
of developing new **software**.

Some of the methods of protecting **software** has
included an external
hardware device, which is plugged into the computer. This device is
interrogated by the protected **software** for the purpose
of authorizing the use of the **software**.

Unfortunately, it is all too easy to analyze the
software and provide a **software**
bypass around the code which requests the authorization. More complex
schemes have been used to obscure the authorization process and

protection scheme in an attempt...In the music industry, co-processor cards are used, along with the host
processor, to provide complex effects and sound processing via plug-in coprocessor **software** modules. Such co-processor cards
can al so be used for other purposes. Because the co-processor instruction sets are difficult and very complex, the potential market is small. The result is that the cost of co-processor
software plug-in modules is high. Unfortunately, the
high cost of the modules has resulted in a high percentage of unauthorized copies of the plug-in...on an attached coprocessor. The present invention addresses such a need.

SUMMARY OF THE INVENTION
The present invention provides a method and system for protecting **software** from unauthorized use on a computer system
utilizing a security device. The method and system include encrypting the **software** to be protected using an encryption key. The
use of the **software** on the computer system is then
authorized by generating the encryption key within the security device using information supplied from the **software**. Once the
encryption key generated by the security device is received on the computer system, the encryption key used to decrypt the encrypted **software** for execution on the computer system..,
In a further aspect of the present invention, the identity of the encryption key is further maintained by first...
...the scrambled encrypted security key is encrypted with a second encryption key that is generated by the security device from the information received from the **software**. When the
encrypted scrambled encryption key is received on the computer system, the second encryption key provided with the **software**
must be used to decrypt the encryption key before the encryption key can be descrambled and used to decrypt the **software**.

According to the method and system disclosed herein, the protected **software** only contains part of the information needed
for decryption, and must
3
receive the remaining information from the security device before the **software** can be used. Similarly, the security device
cannot generate the encryption key without receiving information from the **software**. In the embodiment where the encryption key
is randomized with information received from the
software prior to being
encrypted and sent to the computer system, the method ...a computer system and external security device with a co-processor plug-in board.

FIG. 3 is a flow chart illustrating the process of protecting **software** from unauthorized use on a computer system in
a preferred embodiment of the present invention.
FIG. 4 is a flow chart illustrating the process of preparing a **software** package for use in accordance with the ...
preferred embodiment of a keyset and the process of generating the keyset.

00809296   **Image available**
PORTABLE AUTHORIZATION DEVICE FOR AUTHORIZING USE OF PROTECTED INFORMATION
   AND ASSOCIATED METHOD
PROCEDE ET DISPOSITIF D'AUTORISATION PORTATIF PERMETTANT D'AUTORISER
   L'UTILISATION D'INFORMATIONS PROTEGEES
Patent Applicant/Assignee:
 PACE ANTI-PIRACY INC, 1363 Meridian Avenue, San Jose, CA 95125, US, US
   (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
 CRONCE Paul Allen, 1475 Weaver
   Drive, San Jose, CA 95125, US, US (Residence), US (Nationality),
   (Designated only for: US)
 FONTANA Joseph M, 966 El Rio Drive, San Jose, CA 95125, US, US
   (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
 HAN Franklin Y (et al) (agent), Morrison & Foerster LLP, 755 Page
   Mill Road, Palo Alto, CA 94304-1018, US,
Patent and Priority Information (Country, Number, Date):
 Patent: WO 200142888 A1 20010614 (WO 0142888)
 Application: WO 2000US12906 20000510 (PCT/WO US0012906)
 Priority Application: US 99169506 19991207; US 2000503778 20000214
Parent Application/Grant:
 Related by Continuation to: US 2000503778 20000214 (CIP)
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
 AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES
 FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
 LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
 UG US UZ VN YU ZA ZW
 (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
 (AP) GH GM KE LS MW SD SL SZ TZ UG ZW
 (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 15293

Patent Applicant/Inventor:
 CRONCE Paul Allen...
Legal Representative:
Fulltext Availability:
 Detailed Description
 Claims

Detailed Description
... beginning of each regular issue of'the PCT Gazette.

PORTABLE AUTHORIZATION DEVICE
FOR AUTHORIZING USE OF PROTECTED INFORMATION
AND ASSOCIATED METHOD
CROSS-REFERENCE TO RELATED **APPLICATIONS**
This **application** claims priority to provisional
Application No. 60/169,506, filed December 7, 1999 and
to utility **Application** No. 09/50'),778, filed
February 14, 2000.

1 0 BACKGROUND OF THE INVENTION
I . Field of the Invention
This invention relates generally to techniques...

...authorization device (commonly known as a "dongle") for authorizing a
host system to use protected information.
1 5
2. Description of the Related Art
A **software** "wrapper" is a conu-nonly used technique
for selectively authorizing the use of protected information associated
with a host system such as a personal computer or a server. The protected
information, for example, may comprise a **software**
program to be executed, or data to be processed, by
the host system. The **software** wrapper permits an
end-user to access or execute the protected **program** or
data only if a predetermined condition is met. The predetermined
condition can be, for example, the running of a trial period that allows
the end-user to evaluate the protected **program** or data
or the presentation of the proper authorization information by the
end-user. The authorization information, for example, may be a password
manually entered by the end-user or digitally encoded data. A discussion
of **software** wrappers can be found, for example, in The
Seybold Report on Internet Publishing, Dec. 1997, no. 4, vol. 2, p. 3.

There are several techniques...

...Dongles are small, readily transportable electronic devices as
described, for example, in U.S. Patent No. 4,562,306. Dongles are
typically provided by the **software** vendor together
with the wrapped **software program**
they are intended to authorize.

To enable the **software program** to
run on a particular computer, the end-user simply connects the dongle to
a communications port of the computer, such as a parallel port or
Universal Serial Bus (USB) port. Therefore, the end-user can authorize a
number of different computers to run the **program**
simply by connecting the dongle to whichever computer that he or she
desires to run the **program** on at any given time.

However, a disadvantage presented by dongles is that they typically store
authorization information for only one **software**
program or perhaps for a group of

software I 0 programs from a single
vendor. Consequently, because an end-user typically might use several
software programs from multiple
vendors at any given time, he or she might have to carry around multiple
dongles, which could be cumbersome and inconvenient.

Another disadvantage is that the authorization information stored in the
dongle is typically set by the software vendor during
manufacture and generally cannot be 1 5 subsequently updated. As a
result, when a software vendor provides an end-user
with a software upgrade, add-on or plug-in, etc. for a
protected software program, the
vendor often also delivers a new dongle to authorize the associated
software. This is not very costeffective for
software vendors because the cost of the dongle itself
can be significant in relation to the value of the associated
software.

In a second technique known in the art, the authorization information is
stored on a magnetic floppy disk known as a "key diskette." The key...

...a type of information authority, which is a secure and trusted device
for transmitting and receiving information. The key diskette is typically
provided by the software vendor with the wrapped
software program. To authorize the
software program to run on a
particular computer, the end-user inserts the key diskette in the
computer to transfer the authorization information, typically a secret
key, from the key diskette to the hard disk drive of the computer. Before
the computer begins execution of the program, the
software wrapper verifies that the correct key is
present on the hard disk drive, and if so, allows the computer to execute
the program. This technique is used in the Pace
Anti-Piracy InterLok product, which was developed by the applicant of the
present invention.
An advantage of this technique over dongles is that authorization
information for many different software
programs from multiple vendors can be stored on the
hard disk drive of the computer. Consequently, an end-user who runs
multiple programs on a
2
computer does not need to keep multiple
key diskettes on hand to authorize each of the
programs.

This technique suffers from several shortcomings, however. First, the
authorization information is not readily transferable between computers.
Typically, the key diskette is permitted to transfer...

...because it is stored on that computer's internal hard disk drive.
Consequently, if the enduser wants to authorize a new computer to run a
software program but the key
diskette has run out of authorizations, the authorization information

must be removed from one of the computers containing the authorization information and...to enable functions on multiple computers.

An advantage of the security device described in the '891 patent is that it is relatively inexpensive for a **software** vendor to provide authorization information for **software** updates, add-ons, plug-ins, etc. because the authorization information is delivered using smart cards rather than dongles. Smart cards are significantly less expensive than...

...increases the complexity and cost of the security device because it necessitates that the device implement memory management or protection mechanisms in hardware and/or **software**. Second, the security device apparently is not capable of receiving authorization information from multiple types of information authorities. The '891 patent mentions that the security...

...such as floppy disks or computer servers. Consequently, it appears that the use of the security device as an authorization device is limited to those **software** vendors that support smart cards as a data delivery mechanism.

In view of the shortcomings of the above-described techniques, it is an object of...is presented to enable any person skilled in the art to make and use the invention, and is provided in the context of a particular **application** and its requirements. Various modifications to the preferred embodiment will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments and **applications** without departing I 0 from the spirit and scope of the invention. Moreover, in the following description, numerous details are set forth for purpose of...

...illustrates an authorization system 100 in accordance with a presently preferred embodiment of the invention. The authorization system 100 comprises one or more access control **programs** II 7 associated with a host system 1 1 0, a portable authorization device 140, and one or more information authorities 160, 180 and 185...

...use a plurality of items of protected information II 5 associated with the host system, as described in detail below.

Each of the access control **programs** II 7, which may also be referred to as a **software** wrapper," is used to control access to one of the respective items of protected infon-nation I 1 5. The access control **program** I 1 7 authorizes the host system I 1 0 to use the associated item of protected information I 1 5 only if the end-user provides the correct authorization information to the access control **program**. The access control **programs** II 7, in conjunction with the host system I I 0, are also used to control communications between the indirect information authorities 180 and 185 and the host system I 10. Each item of protected information 1 15 and respective access control

20/3,K/3   (Item 1 from file: 350)
DIALOG(R)File 350: Derwent WPIX

0013615529 - Drawing available
WPI ACC NO: 2003-710864/200367
XRPX Acc No: N2003-568440
Software license information delivery method, involves
validating signed license using publisher public key and using terms to
control use of **software** product
Patent Assignee: CRONCE P A (CRON-I)
Inventor: **CRONCE P A**
Patent Family (1 patents, 1 countries)

Patent			Application				
Number	Kind	Date	Number	Kind	Date	Update	
US 20030149670	A1	20030807	US 200272597	A	20020205	200367	B

Priority Applications (no., kind, date): US 200272597   A 20020205

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030149670	A1	EN	20	10	

Software license information delivery method, involves
validating signed license using publisher public key and using terms to
control use of **software** product
Original Titles:
Method and system for delivery of secure **software**
license information
Inventor: **CRONCE P A**

  Alerting Abstract ...response to a key authority receiving a signed
license request. The license is signed with a publisher private key and is
transmitted to an authorizing **program**. The signed
license is va...

...lidated using the publisher public key and the license terms are used to
control use of **software** product.USE - Used for
delivering license information to control licensed
software usage...

...DESCRIPTION OF DRAWINGS - The drawing shows a flow diagram for the
process of delivering secure license information to a
software program.

Title Terms/Index Terms/Additional Words: **SOFTWARE;**

Original Publication Data by Authority

Argentina

 A system and method for delivery of secure **software**
license information to **authorize** the use of a
software program is disclosed.
The method and system comprises a
computer system for executing the **software**
program and the **authorizing**
program, and a license **server,**
connected to the computer system over a network. The method and system
include associating a publisher certificate and a signed product key pair
with the **program** to be authorized,
generating a license request containing user and product
information and signed by the private key from the product key pair,
transmitting the license request to a...

...the license request and license terms, signing the license with the
publisher private key associated with the publisher certificate,
transmitting the license to the authorization **program,**
validating the license **using** the publisher certificate,
and using the license terms to control the use of the
software program.

Claims:
 What is claimed is: **1**. A method for the delivery of secure
software license information to authorize use of a
software product, the method
comprising the steps of: (a) **associating** with a
software publisher a private and
public key pair,
wherein the **software publisher**
provides the **software** product **and**
includes a
software program
and an authorization **program**
within the **software** product; (b)
associating a product private and
public key with **the**
software product, and including the product private key
with the authorization **program**; (c)
upon invocation of the **software**
product on a computer, (i) generating **by** the
authorization **program** a license request containing
user and product information, (ii) digitally signing the
license request with the **product** private key, and (iii)
transferring the signed license request to a key authority,   (d) in
response to the key authority receiving the signed license request...

...from the license request and license terms, (ii) signing the license
with the publisher private key, and (iii) transmitting the signed license

to the authorizing **program**; and (e) validating the
signed license using the publisher public key, and using the license terms
to control the use of the **software** product.

III. Patent Files from Dialog

A. All Databases

File 324:GERMAN PATENTS FULLTEXT 1967-200945
    (c) 2009 UNIVENTIO/THOMSON
File 348:EUROPEAN PATENTS 1978-200945
    (c) 2009 European Patent Office
File 349:PCT FULLTEXT 1979-2009/UB=20091105|UT=20091029
    (c) 2009 WIPO/Thomson
File 344:Chinese Patents Abs Jan 1985-2006/Jan
    (c) 2006 European Patent Office
File 347:JAPIO Dec 1976-2009/Jul(Updated 091030)
    (c) 2009 JPO & JAPIO
File 350:Derwent WPIX 1963-2009/UD=200972
    (c) 2009 Thomson Reuters
File 371:French Patents 1961-2002/BOPI 200209
    (c) 2002 INPI. All rts. reserv.

? **ds**

Set	Items	Description
S1	7086030	SOFTWARE OR APP OR APPS OR APPLICATION? ? OR PROGRAM OR PROGRAMS OR PROGRAMME? ?
S2	12705	S1(5N)(AUTHORIZ? OR AUTHORIS?)
S3	1835	LICENSE? ?(5N)REQUEST? ?
S4	56	S3(5N)(CREATE OR CREATES OR CREATING)
S5	1906	(2ND OR SECOND)(3N)(PUBLIC()KEY? ?)
S6	588	S5(5N)ENCRYPT?
S7	128	(1ST FIRST OR PRIMARY)(5N)(PUBLIC()KEY? ?)
S8	16	S7(5N)DECRYPT?
S9	9094	MULTIPLE(3N)KEY? ?
S10	1125	PUBLIC()KEY()PAIR? ?
S11	3517	(TRANSMIT? OR TRANSMISS? OR SEND OR SENDS OR SENDING OR FORWARD???)(5N)(AUTHORITY OR AUTHORITIES)
S12	20	AU=(CRONCE, P? OR CRONCE P? OR PAUL(2N)CRONCE)
S13	13	S2 AND S4
S14	1	S13 AND (S6 OR S8)
S15	3	S13 AND (S9 OR S10)
S16	3	S15 NOT S14
S17	0	S16 AND S11
S18	0	S12(S)S2
S19	19	S12 AND S1
S20	3	S19 AND (S9 OR S10)

Your case

14/3,K/1   (Item 1 from file: 350)
DIALOG(R)File 350: Derwent WPIX

0013615975 - Drawing available
WPI ACC NO: 2003-711321/200367
XRPX Acc No: N2003-568873
License-managed toolset delivery method involves using same
authorization process by **software**
toolset and **software** product to obtain respective
licenser
Patent Assignee: CRONCE P A (CRON-I)
Inventor: CRONCE P A
Patent Family (1 patents, 1 countries)

Patent			Application				
Number	Kind	Date	Number	Kind	Date	Update	
US 20030156719	A1	20030821	US 200280639	A	20020221	200367	B

Priority Applications (no., kind, date): US 200280639 A 20020221

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030156719	A1	EN	25	13	

License-managed toolset delivery method involves using same
authorization process by **software**
toolset and **software** product to obtain respective
licenser

  Alerting Abstract ...NOVELTY - When the **authorization**
process is invoked in the **software** toolset/software
product, the toolset publisher/software product publisher is the publisher
in the process, and the toolset/software product is the software program in
the process. A software toolset and a **software** product
use the same **authorization** process to obtain respective
licenses.

Original Publication Data by Authority

Argentina

Assignee name & address:
Original Abstracts:
 A method for delivery of a licensed toolset to a software publisher for
creating license-managed software products is disclosed.
<B>The method comprises providing an
authorization process, and implementing the
authorization process for both a toolset publisher and related toolset and
a software publisher and related **software** product,
whereby the **same authorization**
process is used to obtain respective licenses. The

authorization process includes creating a first public and private key pair for the software publisher, creating a second public and private key pair for the **software** product, creating an **authorization program** for the **software program**, with embedded **copies of** the first and second public keys, and combining the **software program** and the **authorization program**, such that **when the authorization program** is invoked, **the authorization program** obtains a **license for** controlling the use of the software program. The license is obtained by **creating a license request, encrypting** the **license request** using the **second private** key, transmitting the **license request** to a **key authority**, receiving a **license** from the key authority with license terms, decrypting the license, and using the license terms to control the use of the software program.

Claims:

...is: **1** A method for deliver of a license-managed toolset for creating a license-managed software product, the method comprising the step of: (a) **providing** an **authorization** process, the **authorization** process including the steps of: (i) creating a first public **and** private key pair for a **software** publisher, (ii) creating a second public and private key pair for a **software program**, (iii) creating an **authorization program** for the **software program**, and embedding a copy of **the** first and second public keys **in the** authorization **program, (iv) combining** the **authorization program** with a **software program**, such that when the **software program is invoked** on a computer, the **authorization program obtains** a license

16/3,K/1   (Item 1 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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01719677   **Image available**
WAGER GAME LICENSE MANAGEMENT IN A GAME TABLE
GESTION DES LICENCES DE JEU DE PARI DANS UNE TABLE DE JEU
Patent Applicant/Assignee:

IGT, 9295 Prototype Drive, Reno, Nevada 89521, US, US (Residence), US
  (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
  NGUYEN Binh T, 13210 W. Saddlebow Drive, Reno, Nevada 89511, US, US
    (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  WOLF Dean E et al (agent), Weaver Austin Villeneuve & Sampson LLP,
    P.O. Box 70250, Oakland, California 94612-0250, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 2008116003 A1 20080925 (WO 08116003)
  Application: WO 2008US57525 20080319 (PCT/WO US2008057525)
  Priority Application: US 2007726596 20070321
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AO AT AU AZ BA BB BG BH BR BW BY BZ CA CH CN CO CR CU CZ DE
  DK DM DO DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE
  KG KM KN KP KR KZ LA LC LK LR LS LT LU LY MA MD ME MG MK MN MW MX MY MZ
  NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM
  TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LT LU LV MC
  MT NL NO PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 59221

Fulltext Availability:
  Detailed Description

Detailed Description
... network that uses a secure virtual network.

  FIGURE 9 is a block diagram depicting software transactions in a gaming
  software distribution network controlled by a **software
  authorization** agent.

  FIGURE 10 is an interaction diagram between a gaming software
  distributor, gaming **software** provider and a
  software authorization agent
  depicting an initialization of a gaming software transaction.
  FIGURE 11 is an interaction diagram between a gaming software
  distributor, a gaming **software** provider and a
  software authorization agent
  depicting a gaming **software** transaction.

  FIGURE 12 is an interaction diagram between a gaming software
  distributor, a gaming machine and a **software
  authorization** agent depicting a gaming
  software transaction.

FIGURE 13 is flow chart depicting a method in a
software authorization agent
initializing a gaming **software** transaction.

FIGURE 14 is flow chart depicting a method in a
software authorization agent of
authorizing a gaming **software**
transaction.

FIGURE 15 is a block diagram of an interface used to provide information
about gaming **software** transactions generated by a
software authorization agent.

FIGURE 16 is a block diagram of a gaming system of the present invention.

FIGURES 17A-D are block diagrams showing interactions between different
...be the only viable way to provide cost effective gaming services via a
network. The virtual network is enabled by an encryption scheme which
utilizes **multiple key** encryption
and symmetric encryption keys to provide secure communication of
sensitive gaming data. For each session, the symmetric encryption keys
may be randomly generated or...requested may be generated. In 745, the
billing request message may be sent to the gaming machine owner
identified in the gaming license request message.

SOFTWARE DISTRIBUTION WITH DOWNLOAD
AUTHORIZATION

USING A VPN

FIGURE 8 is a block diagram of gaming software distribution network that
uses a secure virtual network. In the present invention, gaming software
may be transferred between various gaming devices, in a gaming
software distribution network 90, after receiving
authorization from a gaming
software authorization agent 50.
The gaming **software authorization**
agent 50 may be a conventional data server including but not limited to a
database 202, a router 206, a network interface 208, a CPU...

...CPU 204 executes software to provide the functions of the authorization
agent 50 as will be described below in more detail. In general, the
gaming **software authorization** agent
50 approves all gaming **software** transactions between
two gaming devices in the gaming software distribution network and stores
a record of the gaming software transactions. Database 202 may be used...

...so that gaming machine operators may more easily reconfigure gaming
machines with different gaming software to respond to shifting customer
tastes and demands. The gaming **software**
authorization agent 50 meets this need by allowing
gaming software to be electronically transferred between gaming devices,

such as game servers and gaming machines, in a manner that may be easily
monitored and regulated. For instance, the **software**
authorization agent 50 may be maintained or supervised
by a gaming regulatory agency. However, the **software**
authorization agent 50 may also be maintained by a
gaming entity that controls many gaming properties to track software
distributions on various gaming machines. In addition, besides monitoring
electronic transfers of gaming **software**, the
software authorization agent 50 may
also be used to store a record of any change of gaming software on a
gaming machine such as changes resulting from...casino accounting office
142 may obtain information from gaming devices connected to the RF
network via the Internet 304.

In the present invention, records of **authorizations**
for the transfer of gaming **software** between gaming
devices may be stored in the database 202. Thus, given an initial
distribution of gaming software in the gaming software distribution
network 90 for each gaming device, the gaming **software**
authorization records may be used to track the gaming
software distribution for gaming devices in the gaming distribution
network as a function time. This tracking capability...

...is described with respect to FIG. 15.

FIGURE 9 is a block diagram depicting software transactions in a gaming
software distribution network controlled by a **software**
authorization agent. Gaming
software transactions between a
software authorization agent 50, a
gaming **software** distributor 53, a gaming software
content provider 51 and two gaming machines, 54 and 55 in a gaming
software distribution network are described. In FIG...
...purposes only and the present invention is not limited to the gaming
devices shown in the Figure.

As described with respect to FIG. 8, the **software**
authorization agent 50 is used to
authorize gaming **software** transfer
between two gaming devices. For instance, in 214, the gaming software
distributor 53, which may be a game server maintained by a casino, may
contact the **software authorization**
agent 50 to request a transfer of gaming software from the gaming
software provider 51 to the gaming distributor 53.

The gaming distributor may also contact the **software**
authorization agent to request a transfer of gaming
software from the gaming software provider 51 to another gaming device
such as gaming machine. The **software**
authorization agent 50 may approve or deny the request
depending on the gaming software transaction information contained in the
request. For instance, if a gaming device, such as the gaming software
distributor 53, cannot be identified and authenticated by the

software authorization agent 50,
then the software authorization
agent 50 will deny the request for the transfer of gaming software. As
another example, if the gaming device, has requested a software title
that is unknown to the software
authorization agent 50, then the
software authorization agent will
deny the request for the transfer of gaming software.

Some details of this gaming software transaction are described with
respect to FIG.

11, 13 and 14.

After receiving authorization from the
software agent, the gaming software distributor 53 may
contact the gaming software content provider 51 and receive an
electronically download of gaming software from the content...

...occur directly between two gaming devices as shown in 210. In another
embodiment of the present invention, gaming software transfers may be
routed through the software
authorization agent 50. For instance, to transfer
gaming software to the gaming software distributor 53, the gaming
software content provider 51 sends the gaming software
to the software authorization agent
50 which then forwards the software to the gaming
software distributor. When the
software authorization agent 50
receives the gaming software it may perform one or
more checks on the gaming software to insure it has been approved for use
or just simply forward to the destination gaming device without
additional checks. All or a portion of the gaming software transfers may
be routed through the software
authorization agent 50.

In 212, prior to downloading gaming software to the gaming distributor or
any other gaming device, the gaming software content provider 51, which
may be a game server maintained by a company that develops gaming
software or owns the rights to gaming software, may validate the gaming
software transaction with the
software authorization agent 50.
The gaming software content provider 51 may send
gaming software transaction information received in a request for a
transfer of gaming software received from a gaming device, such as the
gaming software distributor 53, to the gaming software
authorization agent 50. The
software authorization agent 50 may
use the gaming software transaction information to approve or reject the
transfer of the gaming software. The details of this gaming software...

...After sending the gaming software to the gaming software distributor 53,
the gaming software content provider 51 may report details of this

transaction to the **software authorization** agent 50 in 212. For instance, the gaming software provider may generate a gaming software transaction receipt that includes a unique digital signature for the...

...after receiving the gaming software from the gaming software content provider 51, the gaming software distributor 53 may report details of this transaction to the **software authorization** agent 50 in 214. For instance, the gaming software distributor 53 may generate a gaming software transaction receipt that includes a unique digital signature for the gaming **software** that was received. The **software authorization** agent 50 may compare receipts from the sender and the receiver of the gaming software to insure the correct gaming software has been transferred between...

...and calculate a digital signature. The digital signature may be sent to the gaming distributor 53 through the local area network and forwarded to the **software authorization** agent 50 to complete the transaction.

In another embodiment, after a request from a gaming software distributor 53, in 220, a gaming software content provider... ...may unpack the software, which may have been compressed, and send acknowledgements of the transfer directly to the gaming software content provider 51, the gaming **software** distributor and the **software authorization** agent.

In yet other embodiments, a game server, such as the gaming software distributor 53, may be used to reconfigure the gaming software on a...

...gaming software to the gaming machine.

The transfer of gaming software from the game server to the gaming machine may require an approval from the **software authorization** agent 50. Further, even if the an approval is not required, gaming software transaction information may be sent to the **software authorization** agent so that the gaming **software** residing on any gaming machine at a particular time may be known. Details of a gaming software transaction between a gaming machine 54, a game server 53 and **software authorization** agent 50 are described with respect to FIG. 12.

The present invention is not limited to only electronic transfers of gaming **software** between gaming devices. The **authorization** methods may be also be applied to the manual installation of gaming software. For example, prior to manually installing gaming software on a gaming machine, an installation technician may request approval of the gaming **software** transaction from a **software authorization** agent 50 using a hand-held wireless device. The gaming software, which may be stored on a memory device such

as CD-ROM may been...

...installed on a gaming machine and information regarding the gaming machine may be entered into the hand-held wireless device and then sent to the **software authorization** agent. The **software authorization** agent may use this information to approve the gaming software transaction and to track the gaming software installed on gaming machines.

In another example, a technician may use the **software authorization** agent to manually check gaming **software** installed on a gaming machine. The technician may read gaming software information from a particular gaming machine and then using a hand-held wireless device relay the gaming machine software information and gaming machine information to the **software authorization** agent 50. The **software authorization** agent 50 may compare the information received from the hand-held wireless device with gaming software information stored in a gaming software registration database to determine whether the gaming machine has the correct **software** installed on it. The **software authorization** agent may send a message to the hand-held wireless gaming device indicating whether or not the correct gaming software is installed on a gaming...

...particular gaming machine and what gaming software upgrades are available. When performing gaming machine maintenance, a gaming machine operator may request this information from the **software authorization** agent 50 to aid in the maintenance process.

Gaming software may be transferred between two gaming devices using a wireless communication connection. For example, within...

...also be performed using cellular communication technologies with cellular communication standards used in the cellular communication industry.

As described with respect to FIG. 8, the **software authorization** agent 50 may include a gaming software transaction database. The gaming software transaction database may be used to track the distribution of gaming software on...
...instance, in 216, a gaming software content provider may request a report regarding downloads of their gaming software from game servers to gaming machines. The **software authorization** agent 50 may receive the request, query the gaming software transaction database and generate a report for the gaming software content provider. This type of...

...and market trending involving the transfer and the use of gaming software.

FIGURE 10 is an interaction diagram between a gaming software distributor

53, gaming **software** provider 51 and a
software authorization agent 50
depicting an initialization of a gaming software transaction for one
embodiment of the present invention. The example is provided for
illustrative purposes only...

...request message matches gaming software identification information
contained in a database used by the agent 50.

In 922, when the download request is approved, the
software authorization agent
creates a gaming **software** transaction record and
stores the record to a gaming software transaction database. The gaming
software transaction record may include but is not limited to gaming...

...be loaded to a game server. Each time the game server downloads the
gaming software to a gaming machine, it may request permission from the
software authorization agent 50
using the transaction number in the original record. The
software authorization agent may
authorize the game server to download the software to
a gaming machine as long as the number of permitted downloads has not
been exceeded.

In 922 and 923, the **software**
authorization agent may send an approval message with
all or a portion of the gaming software transaction information stored in
the gaming software transaction record to...

...agent may send a notification message to the gaming software provider
51. The message may notify the gaming software content provider 51 that
a gaming **software** transaction has been
authorized that allows some of the provider's 51 to be
transferred to another gaming device.

FIGURE 11 is an interaction diagram between a gaming software
distributor, a gaming **software** provider and a
software authorization agent
depicting a gaming **software** transaction. In 850, the
distributor may generate a software download request message. The
download request message may include gaming software transaction
information generated in the...

...51 sends the message to the distributor 53. In 857, the distributor
receives the message and decrypts it with the K(S) received from the
software authorization agent 50 in
the **authorization** message.

In 859, the **software** provider 51 may optionally
generate a download request message to validate the gaming software
transaction requested by the distributor. The download request message
may include...by the destination gaming device and the session encryption
key, K(S). In one embodiment, the download package and reply may be

routed through the **software**
authorization agent 50 which may perform checks on the
gaming software before forwarding it to the destination gaming machine.
Thus, the download package and receipt may be encrypted with the public
encryption key used by the **software**
authorization agent 50.

The download package and the download receipt may go to separate gaming
devices. In one embodiment, the download package may be forwarded by...

...was described with respect to FIG. 9.

FIGURE 12 is an interaction diagram between a gaming software distributor
53, a gaming machine 54 and a **software**
authorization agent 50 depicting a gaming
software transaction. In this example, the distributor
53 may be a game server operated by a casino and the gaming machine 54
may be one of...

...purposes.

Optionally, in 978, the gaming machine 54 may generate a receipt or some
other type of acknowledgement message that it has received the gaming
software and send it to the
authorization agent 50. In 968, the game server of the
distributor 53 may also send a receipt or acknowledgement message to the
agent 50. In 970...

...the acknowledgement messages to determine if the gaming software
transaction has been correctly carried out.

FIGURE 13 is flow chart depicting a method in a
software authorization agent
initializing a gaming **software** transaction. In 1000,
the agent receives a gaming software transaction session request message
from a gaming software distributor or another gaming entity desiring a
transfer...

...1002, the authorization may check to determine if the requestor
identified in the message is in a local of database of gaming entities
that are **authorized** to request transfers of gaming
software. When the requestor is not in the database,
in 1004, the agent may terminate the transaction and generate a record of
the attempted transaction and...

...for a gaming software title unknown to the agent.

In 1016, when information in the download request has been validated, the
agent may generate an **authorization** record for the
gaming **software** transaction as previously described
with respect to FIG. 9. The agent may also generate an acknowledgement
message and send it to the requestor. In 1018...

...has been received, the agent may store a record of the authorized transaction to a database. In one embodiment, the agent may also notify a **software** content provider that has been **authorized** to transfer the gaming **software** of the pending gaming **software** transaction that has been **authorized**.

FIGURE 14 is flow chart depicting a method in a **software authorization** agent of **authorizing** a gaming **software** transaction. In 1100, the agent receives a gaming software transfer request form a gaming device. The transfer request may describe a gaming **software** transaction previously generated and **authorized** by the agent. The gaming device may be a game server, a gaming machine or any other gaming device that is allowed to receive gaming...

...for an electronic fund transfer or other payment method.

FIGURE 15 is a block diagram of an interface 1200 used to provide information about gaming **software** transactions generated by a **software** **authorization** agent. The interface menu 1210 may allow a user to view information in different formats, perform queries of a gaming software transaction and perform other...
...being used. To ensure fairness, gaming regulators need to be able show that game software residing on a gaming machine is authentic and approved game **software** from an **authorized** content provider. In light of the above, methods that automate the game changeover process on gaming machine while providing an accurate record of the software...or erase itself when an attempt at tampering has been detected.

The gaming system 1500 of the present invention may include devices 1506 that provide **authorization** to download **software** from a first device to a second device and devices 1507 that provide activation codes or information that allow downloaded software to be activated. The devices, 1506 and 1507, may be remote servers and may also be trusted information sources. Details of a **software authorization** agent 50 used to **authorize** the downloading of game **software** are described with respect to FIGs. 9-11. One example of a method of providing product activation codes that may be used with the present...such as a mobile gaming device, the software certificate 1564 may determine what type of device it is located on. If it is not on **authorized** device, the **software** certificate 1564 may prevent the software application 1562 from executing.

The download history and the usage history may provide records of the origins of the...communication interface between the hand held device and a particular gaming device.

The gaming system 1300 comprises a central game software host 1572, a local **software** download
authorization agent 1506 for
authorizing software downloads, a
license server 1552, two software caches, 1304 and 1306, a game play host
1503 connected to two game play interfaces, 1511, four gaming...

...system 1300 may be combined or overlapped. For example, a single server
may provide the functions of the central game software host 1572, the
local **software** download
authorization agent 1506 and the license server 1552.
In another example, the gaming machine, in some instances, may act as a
game software host, a software...

...for more details).

The gaming machine 2 may include software 1430 for acting as a download
authorization host as described with respect to FIGs. 9 (
software authorization agent 50) or
FIGs. 16 and 18 (**software** download
authorization agent 1506). As a download authorization
host, the gaming machine may receive requests from other gaming devices
requesting permission to download software to another the...has multiple
components, each component may have its own certificate. In one
embodiment, a licensing agent on the gaming machine reads the
certificate(s) and **creates** a
license request for a token from
the local license server. If it is not built-in, a software agent may
send a request for a token, receive...To ensure fairness, gaming
regulators need to be able show that game software residing on, for
example, a game table is authentic and approved game
software from an **authorized** content
provider. For certain entities, such as game content providers, to be
properly compensated they may also need to know the locations their
software is...

16/3,K/2   (Item 2 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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01701782   **Image available**
WAGER GAME LICENSE MANAGEMENT IN A PEER GAMING NETWORK
GESTION D'UNE LICENCE POUR UN JEU DE PARI DANS UN RESEAU DE JEU DE PAIR A
   PAIR
Patent Applicant/Assignee:
 IGT, 9295 Prototype Drive, Reno, NE 89521-8986, US, US (Residence), US
   (Nationality), (For all designated states except: US)

Fulltext Availability:
  Detailed Description

Detailed Description
... network that uses a secure virtual network.

  FIGURE 9 is a block diagram depicting software transactions in a gaming
  software distribution network controlled by a **software**
  authorization agent.

  FIGURE 10 is an interaction diagram between a gaming software
  distributor, gaming **software** provider and a
  software authorization agent
  depicting an initialization of a gaming software transaction.

  FIGURE 11 is an interaction diagram between a gaming software
  distributor, a gaming **software** provider and a
  software authorization agent
  depicting a gaming **software** transaction.

  FIGURE 12 is an interaction diagram between a gaming software
  distributor, a gaming machine and a **software**
  authorization agent depicting a gaming
  software transaction.

  FIGURE 13 is flow chart depicting a method in a

software authorization agent
initializing a gaming software transaction.

FIGURE 14 is flow chart depicting a method in a
software authorization agent of
authorizing a gaming software
transaction.

FIGURE 15 is a block diagram of an interface used to provide information
about gaming software transactions generated by a
software authorization agent.
FIGURE 16 is a block diagram of a gaming system of the present invention.

FIGURES 17A-D are block diagrams showing interactions between different
...be the only viable way to provide cost effective gaming services via a
network. The virtual network is enabled by an encryption scheme which
utilizes multiple key encryption
and symmetric encryption keys to provide secure communication of
sensitive gaming data. For each session, the symmetric encryption keys
may be randomly generated or...license requested may generated. In 745,
the billing request message may be sent to the gaming machine owner
identified in the gaming license request message.

SOFTWARE DISTRIBUTION WITH DOWNLOAD
AUTHORIZATION

USING A VPN

FIGURE 8 is a block diagram of gaming software distribution network that
uses a secure virtual network. In the present invention, gaming software
may be transferred between various gaming devices, in a gaming
software distribution network 90, after receiving
authorization from a gaming
software authorization agent 50.
The gaming software authorization
agent 50 may be a conventional data server including but not limited to a
database 202, a router 206, a network interface 208, a CPU...

...CPU 204 executes software to provide the functions of the authorization
agent 50 as will be described below in more detail. In general, the
gaming software authorization agent
50 approves all gaming software transactions between
two gaming devices in the gaming software distribution network and stores
a record of the gaming software transactions.

DIALOG(R)File 349: PCT FULLTEXT

01537571
GENIUS ADAPTIVE DESIGN
MODELE D'ADAPTATION AU GENIE
Patent Applicant/Inventor:
  CABINALLA Linda, 1145 Delaware St, Fairfield, CA 94533, US, US
    (Residence), US (Nationality), (Designated for all)
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200781519 A2 20070719 (WO 0781519)
  Application: WO 2006US48704 20061219 (PCT/WO US2006048704)
  Priority Application: US 2005755291 20051230; US 2006756607 20060105; US
    2006778313 20060301; US 2006783018 20060315; US 2006786906 20060328; US
    2006852794 20061018
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
  DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM KN
  KP KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MY MZ NA NG NI
  NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT
  TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
  PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 520275

Fulltext Availability:
  Detailed Description

Detailed Description
... many ways, eg: clients speak with each other. Clients 'analyze / 'ba
  the services/invention features. INTERACTIVE = the more the better. Live
  versus automated phone attendants. **LICENSEE** /
  LICENSOR = Client and Landlord behavior ['ba]. How they
  maximize/minimize, monetary income/expenditures/royalty fees. 'W5
  something is licensed/used. 'W5 licensee/licensors don't...

...by colons. E l, Electronic 'Fq, Frequency —the
  electrical type. 'IMI, Feature, Part, and maybe Function KN, N,
  Invention. Often followed by colons. 'KW, **Key** words.
  Often followed by colons. .'Nr, Notifier, Alerts 'Misc, Miscellaneous
  Obvious, Exists OTD, Other technical details, For Techies, Read later.
  Often followed by colons. SW...data can also be entered into computer
  without tedious computer mouse)-> CPU (software analyzes entered data)
  = Software analyzes database of each entered part with its
  multiple uses also shown in a pattern of branching

trees (this database can be the invention tree) = Software converts
originally inputted diagram into hundreds of types...

...fraction of the applicable US Patent Classification numbers. .
Alternatives & Keywords for ACCESS feature: admission, admittance,
approach, avenue, connection, contact, course, door, entrance, entree,
entry, introduction, **key**, open door (slang), passage,
path, road, route, way . US Patent Classification code for Access: 726.4
Information Security / Authorization . Alternatives & Keywords for
ADAPTING feature: acclimate...

...organize, pool, proportion, pull together, reconcile, reconciliate,
regulate, shape up, synchronize, systematize, team up Alternatives &
Keywords for DESIGNATED feature: allocate, allot, appoint, apportion,
appropriate, assign, **authorize,** button down (slang),
characterize, charge, choose, commission, connote, constitute, define,
delegate, denote, depute, deputize, describe, dictate, earmark (slang),
elect, evidence, favor, finger (slang), indicate, individualize...be
"clap" (make bursts of sound, eg: three beeps = the number 3 of tel #)
Voice Activated Key Pad: by making clear monotones in single or
multiple bursts their corresponding
key act as if pressed on normal key pad. Sounds can be
of certain letters to ease memory for people in each language group. For
people...therapeutic. Therapy machine helping people. Also, compensates
for user's state of mind and or current personal info, and or condition,
based on: what user **keys** in, are how well they scored
in the previous physical therapy session. TILT ™ ='Remote
Control Joystick. Otherwise confidential. TR = Transmission: sending /
receiving via: air...

...Programming (adapt) on how it tailors systems to the traits of the users
and or situations.

U = See User UIP= See Adapt UK ™ = User **Keys**
In Information. This combines the U (user) with the K. (keyboard)
feature. Or just call this feature "K" or "R" (remote control) as a user
...

...be 'tailored to the user / what is perceived as the user's belief for
what the [stolen] 'accessed feature possesses. This data can become
legally **authorized software** like
virus [which leaves a trail] that can hopefully later be deactivated
if/when time is right [hacker apprehended along with their accomplices].
This patent...designated" key words (found via saw's search function) of
files, or functions (their labels, command codes, instructions,
"q").-Accessor is assigned a list of **key** words, these
child*, kid*, image*, imaging, create, creating...

YOUR CASE
20/3,K/1   (Item 1 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT

01025666 **Image available**
A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF PROTECTED
   SOFTWARE UTILIZING A PORTABLE SECURITY DEVICE
SYSTEME ET PROCEDE METTANT EN OEUVRE UN DISPOSITIF DE SECURITE PORTATIF
   POUR EMPECHER L'UTILISATION NON AUTORISEE D'UN LOGICIEL PROTEGE
Patent Applicant/Assignee:
  PACE ANTI-PIRACY INC, 1363 Meridian Avenue, San Jose, CA 95125, US, US
    (Residence), US (Nationality)
Inventor(s):
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    San Jose, CA 95125, US,
Legal Representative:
  SULLIVAN Stephen G (agent), Sawyer Law Group LLP, P.O. Box 51418, Palo
    Alto, CA 94303, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200354662 A2-A3 20030703 (WO 0354662)
  Application: WO 2002US40185 20021217 (PCT/WO US02040185)
  Priority Application: US 200128581 20011220
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
  SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK
  TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 9183

A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF PROTECTED
   SOFTWARE UTILIZING A PORTABLE SECURITY DEVICE
Inventor(s):
... CRONCE Paul A
Patent Applicant/Inventor:
Fulltext Availability:
  Detailed Description
  Claims

English Abstract
  A method and system for protecting software from
  unauthorized use on a computer system using an external security device
  (130) is disclosed. The method and system include encrypting the
  software to be protected using an encryption key. The
  use of the software on the computer system is then
  authorized by generating the encryption key within the security device

(130) using information supplied from the softwre. Once the encryption key generated by the security device (130) is received on the computer system, the encryption key used to decrypt the encrypt **software** for execution on the computer system.

Detailed Description
A SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED USE OF PROTECTED **SOFTWARE** UTILIZING A PORTABLE SECURITY DEVICE
FIELD OF THE INVENTION
The present invention relates generally to the prevention of **software** piracy and more particularly to preventing unauthorized use of protected **software** by utilizing a portable personal security device.

BACKGROUND OF THE INVENTION
The problem of **software** piracy is well known in the computer industry. This problem results in substantial losses for **software** developers. Many methods have been used to try to prevent unauthorized use of **software** over the years, with limited success. Typically, the effort put out to break protection schemes is proportional to the value of the protected **software**. Thus, if a **software** **program** has high demand, such as a computer game, or has a high cost per unit, such as a professional tool sold to a small market, it is likely to be attacked by **software** hackers for the purpose of creating an unprotected version of the product. This unprotected version is then made available to others at low cost or recording industry and computer games industry, that some companies are unable to guarantee' the profitability of developing new **software**.

Some of the methods of protecting **software** has included an external
hardware device, which is plugged into the computer. This device is interrogated by the protected **software** for the purpose of authorizing the use of the **software**.

Unfortunately, it is all too easy to analyze the **software** and provide a **software** bypass around the code which requests the authorization. More complex schemes have been used to obscure the authorization process and protection scheme in an attempt...In the music industry, co-processor cards are used, along with the host processor, to provide complex effects and sound processing via plug-in coprocessor **software** modules. Such co-processor cards can al so be used for other purposes. Because the co-processor instruction sets are difficult and very complex, the potential market is small. The result is that the cost of co-processor **software** plug-in modules is high. Unfortunately, the high cost of the modules has resulted in a high percentage of unauthorized copies of the plug-in...on an attached coprocessor. The

present invention addresses such a need.

20/3,K/2   (Item 2 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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00809296   **Image available**
PORTABLE AUTHORIZATION DEVICE FOR AUTHORIZING USE OF PROTECTED INFORMATION
   AND ASSOCIATED METHOD
PROCEDE ET DISPOSITIF D'AUTORISATION PORTATIF PERMETTANT D'AUTORISER
   L'UTILISATION D'INFORMATIONS PROTEGEES
Patent Applicant/Assignee:
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Patent and Priority Information (Country, Number, Date):
  Patent: WO 200142888 A1 20010614 (WO 0142888)
  Application: WO 2000US12906 20000510 (PCT/WO US0012906)
  Priority Application: US 99169506 19991207; US 2000503778 20000214
Parent Application/Grant:
  Related by Continuation to: US 2000503778 20000214 (CIP)
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES
  FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
  LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
  UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 15293

Patent Applicant/Inventor:
  CRONCE Paul Allen...
Legal Representative:
Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... beginning of each regular issue of'the PCT Gazette.

PORTABLE AUTHORIZATION DEVICE
FOR AUTHORIZING USE OF PROTECTED INFORMATION
AND ASSOCIATED METHOD
CROSS-REFERENCE TO RELATED **APPLICATIONS**
This **application** claims priority to provisional
Application No. 60/169,506, filed December 7, 1999 and
to utility **Application** No. 09/50'),778, filed
February 14, 2000.

1 0 BACKGROUND OF THE INVENTION
I . Field of the Invention
This invention relates generally to techniques...

...authorization device (commonly known as a "dongle") for authorizing a
host system to use protected information.
1 5
2. Description of the Related Art
A **software** "wrapper" is a conu-nonly used technique
for selectively authorizing the use of protected information associated
with a host system such as a personal computer or a server. The protected
information, for example, may comprise a **software**
program to be executed, or data to be processed, by
the host system. The **software** wrapper permits an
end-user to access or execute the protected **program** or
data only if a predetermined condition is met. The predetermined
condition can be, for example, the running of a trial period that allows
the end-user to evaluate the protected **program** or data
or the presentation of the proper authorization information by the
end-user. The authorization information, for example, may be a password
manually entered by the end-user or digitally encoded data. A discussion
of **software** wrappers can be found, for example, in The
Seybold Report on Internet Publishing, Dec. 1997, no. 4, vol. 2, p. 3.

There are several techniques...

...Dongles are small, readily transportable electronic devices as
described, for example, in U.S. Patent No. 4,562,306. Dongles are
typically provided by the **software** vendor together
with the wrapped **software program**
they are intended to authorize.

To enable the **software program** to
run on a particular computer, the end-user simply connects the dongle to
a communications port of the computer, such as a parallel port or
Universal Serial Bus (USB) port. Therefore, the end-user can authorize a
number of different computers to run the **program**
simply by connecting the dongle to whichever computer that he or she
desires to run the **program** on at any given time.

However, a disadvantage presented by dongles is that they typically store

authorization information for only one **software
program** or perhaps for a group of
software I 0 **programs** from a single
vendor. Consequently, because an end-user typically might use several
software programs from multiple
vendors at any given time, he or she might have to carry around multiple
dongles, which could be cumbersome and inconvenient.

Another disadvantage is that the authorization information stored in the
dongle is typically set by the **software** vendor during
manufacture and generally cannot be 1 5 subsequently updated. As a
result, when a **software** vendor provides an end-user
with a **software** upgrade, add-on or plug-in, etc. for a
protected **software program**, the
vendor often also delivers a new dongle to authorize the associated
software. This is not very costeffective for
software vendors because the cost of the dongle itself
can be significant in relation to the value of the associated
software.

In a second technique known in the art, the authorization information is
stored on a magnetic floppy disk known as a "key diskette." The key...

20/3,K/3   (Item 1 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0013615529 - Drawing available
WPI ACC NO: 2003-710864/200367
XRPX Acc No: N2003-568440
Software license information delivery method, involves
validating signed license using publisher public key and using terms to
control use of **software** product
Patent Assignee: CRONCE P A (CRON-I)
Inventor: **CRONCE P A**
Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 20030149670	A1	20030807	US 200272597	A	20020205	200367	B

Priority Applications (no., kind, date): US 200272597 A 20020205

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030149670	A1	EN	20	10	

Software license information delivery method, involves
validating signed license using publisher public key and using terms to
control use of **software** product
Original Titles:
Method and system for delivery of secure **software**
license information
Inventor: **CRONCE P A**

Alerting Abstract ...response to a key authority receiving a signed license request. The license is signed with a publisher private key and is transmitted to an authorizing **program**. The signed license is va...

...lidated using the publisher public key and the license terms are used to control use of **software** product.USE - Used for delivering license information to control licensed **software** usage...

...DESCRIPTION OF DRAWINGS - The drawing shows a flow diagram for the process of delivering secure license information to a **software program**.

Title Terms/Index Terms/Additional Words: **SOFTWARE**;

Original Publication Data by Authority

Argentina

Assignee name & address:
Inventor name & address:
Cronce, Paul A...
Examiner:
Original Abstracts:
 A system and method for delivery of secure **software** license information to **authorize** the use of a **software program** is disclosed.
The method and system comprises a computer system for executing the **software program** and the **authorizing program**, and a license **server,** connected to the computer system over a network. The method and system include associating a publisher certificate and a signed product key pair with the **program** to be authorized, **generating** a license request containing user and product information and signed by the private key from the product key pair, transmitting the license request to a...

...the license request and license terms, signing the license with the publisher private key associated with the publisher certificate, transmitting the license to the authorization **program**, validating the license **using** the publisher certificate, and using the license terms to control the use of the **software program**.
Claims:
 What is claimed is: **1**. A method for the delivery of secure **software** license information to authorize use of a **software product**, the method comprising the steps of: (a) **associating** with a **software** publisher a private and **public key pair,**

wherein the **software publisher** provides the **software** product **and includes a software program and** an authorization **program within** the **software** product; (b) **associating a** product private and **public** key with **the software** product, and including the product private key with the authorization **program;** (c) **upon** invocation of the **software** product on a computer, (i) generating **by** the authorization **program** a license request containing **user** and product information, (ii) digitally signing the license request with the **product** private key, and (iii) transferring the signed license request to a key authority, (d) in response to the key authority receiving the signed license request...

...from the license request and license terms, (ii) signing the license with the publisher private key, and (iii) transmitting the signed license to the authorizing **program;** and (e) validating the signed license using the publisher public key, and using the license terms to control the use of the **software** product.

IV. Text Search Results from Dialog

A. Abstract Databases

17/3,K/1   (Item 1 from file: 15)
DIALOG(R)File 15: ABI/Inform(R)

...TEXT: key-based key distribution, on-line access to a key distribution
center is usually needed each time the communicating parties establish an
initial keying relationship. **Second**, in
public-key-based key distribution,
the degree of trust placed on the central authority (e.g., a certification
center) is generally less than the degree of trust...the public key
extension and implemented in the Transaction Security System are now
presented.

PKA subsystem management services. The PKA subsystem management services
allow an **authorized application** to
initialize and manage the public key extension components of the
cryptographic subsystem. The services that belong to this category are the
profile vector build...of a distributed public key need not be kept secret,
but it is required to have integrity. If another user with a different
private and **public key**
pair can cause his or her public key to be mistaken for
a public key of a legitimate user, that user can pretend to be the...

[insert]

V. Text Search Results from Dialog

A. Full Text Databases

File 9:Business & Industry(R) Jul/1994-2009/Nov 11
      (c) 2009 Gale/Cengage
File 16:Gale Group PROMT(R) 1990-2009/Oct 19
      (c) 2009 Gale/Cengage
File 20:Dialog Global Reporter 1997-2009/Nov 12
      (c) 2009 Dialog
File 15:ABI/Inform(R) 1971-2009/Nov 11
      (c) 2009 ProQuest Info&Learning
File 148:Gale Group Trade & Industry DB 1976-2009/Nov 12
      (c) 2009 Gale/Cengage
File 160:Gale Group PROMT(R) 1972-1989
      (c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2009/Oct 13
      (c) 2009 Gale/Cengage
File 610:Business Wire 1999-2009/Nov 12
      (c) 2009 Business Wire.
File 613:PR Newswire 1999-2009/Nov 12
      (c) 2009 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2009/Oct 05
      (c) 2009 Gale/Cengage
File 636:Gale Group Newsletter DB(TM) 1987-2009/Oct 19
      (c) 2009 Gale/Cengage
File 624:McGraw-Hill Publications 1985-2009/Nov 12
      (c) 2009 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2009/Oct 28
      (c) 2009 San Jose Mercury News
File 810:Business Wire 1986-1999/Feb 28
      (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
      (c) 1999 PR Newswire Association Inc
File 88:Gale Group Business A.R.T.S. 1976-2009/Nov 12
      (c) 2009 Gale/Cengage
File 647:UBM Computer Fulltext 1988-2009/Nov W2
      (c) 2009 UBM, LLC
File 674:Computer News Fulltext 1989-2006/Sep W1
      (c) 2006 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2009/Nov 10
      (c) 2009 Dialog
File 369:New Scientist 1994-2009/Nov W1
      (c) 2009 Reed Business Information Ltd.
File 484:Periodical Abs Plustext 1986-2009/Nov 11
      (c) 2009 ProQuest
File 370:Science 1996-1999/Jul W3
      (c) 1999 AAAS

File 553:Wilson Bus. Abs. 1982-2009/Nov
        (c) 2009 The HW Wilson Co

? **ds**

Set   Items   Description
S1   40119441   SOFTWARE OR APP OR APPS OR APPLICATION? ? OR PROGRAM OR PR-
        OGRAMS OR PROGRAMME? ?
S2   189919   S1(5N)(AUTHORIZ? OR AUTHORIS?)
S3   11525   LICENSE? ?(5N)REQUEST? ?
S4   19   S3(5N)(CREATE OR CREATES OR CREATING)
S5   229   (2ND OR SECOND)(3N)(PUBLIC()KEY? ?)
S6   28   S5(5N)ENCRYPT?
S7   79   (1ST FIRST OR PRIMARY)(5N)(PUBLIC()KEY? ?)
S8   0   S7(5N)DECRYPT?
S9   16963   MULTIPLE(3N)KEY? ?
S10   187   PUBLIC()KEY()PAIR? ?
S11   50368   (TRANSMIT? OR TRANSMISS? OR SEND OR SENDS OR SENDING OR FO-
        RWARD???)(5N)(AUTHORITY OR AUTHORITIES)
S12   0   AU=(CRONCE, P? OR CRONCE P? OR PAUL(2N)CRONCE)
S13   0   S2(S)S4
S14   52   S2(S)S3
S15   0   S14(S)(S6 OR S7)
S16   0   S14(S)S5
S17   0   S14(S)(S9 OR S10)
S18   0   S14(S)S11
S19   3   S1(S)S4
S20   2   RD (unique items)

?

20/3,K/1   (Item 1 from file: 16)
DIALOG(R)File 16: Gale Group PROMT(R)
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04952860   Supplier Number: 47278370 (USE FORMAT 7 FOR FULLTEXT)
Novell to Drive Separate Development Tracks
Wirthman, Lisa
PC Week, p124
April 7, 1997
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 676

...   12 servers on Intel Corp.-based hardware.
    Novell also will improve the value of NDS within IntranetWare this
summer by integrating it with an Object **Request** Broker
licensed from Visigenic **Software** Inc.
to **create** a new trader service that will enable objects
to be registered and managed in the directory.

Also, this summer, Novell will deliver free to IntranetWare...

20/3,K/2   (Item 1 from file: 148)
DIALOG(R)File 148: Gale Group Trade & Industry DB

09415946   SUPPLIER NUMBER: 19295899   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Novell to drive separate development tracks. (IntranetWare, network
 services applications) (Company Business and Marketing)
Wirthman, Lisa
PC Week, v14, n14, p124(1)
April 7, 1997
ISSN: 0740-1604   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 723   LINE COUNT: 00063

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licensed from Visigenic **Software** Inc.
to **create** a new trader service that will enable objects
to be registered and managed in the directory.
    Also, this summer, Novell will deliver free to IntranetWare...

VI. Additional Resources Searched

EBSCOhost
0 results